

## AMENDMENTS TO THE SPECIFICATION

Kindly amend the specification as follows:

On page 1 of the specification, under the inventor names, please insert the following:

### --Cross-Reference to Related Applications

This application claims benefit of priority from U.S. Provisional Applications bearing Serial Nos. 60/298,847, filed June 15, 2001, and 60/257,801, filed December 22, 2000, both of which are hereby incorporated by reference as if fully set forth.--

On page 11, please substitute the paragraph on lines 13-22 with the following paragraph:

--Figures 1A through 1C illustrate ~~is an illustration of~~ one exemplary embodiment using a single stranded RNA as the target polynucleotide. Generally, RT refers to reverse transcriptase; heat kill refers to termination of RT activity; exonuclease treatment is an optional additional step to remove excess primer; and denaturation refers to the separation of the first strand DNA from the target polynucleotide. With respect to "round one", the use of random nonamers, exonuclease minus Klenow and Taq polymerase (thermal stable DNA polymerase from *Thermus aquaticus*), a T7 promoter, and an optional A1 "anchor" sequence reflect just one possible embodiment of the invention. With respect to "round two modified", the use of a T3 promoter containing primer reflects just one possible embodiment of the invention.--

Please substitute the paragraph on page 23, line 25, through page 24, line 6, with the following paragraph:

--While the invention simply requires the use of DNA polymerase activity, the invention is preferably practiced with a combination of polymerase activities wherein the individual polymerases are individually selected from exonuclease deficient Klenow, Taq polymerase, and

~~Sequenase~~<sup>TM</sup> SEQUENASE<sup>TM</sup>, optionally in the presence of RNase H, in the synthesis of the second strand of the cDNA molecule corresponding to the target polynucleotide. Most preferred is the use of exonuclease deficient Klenow alone or in combination with Taq polymerase in the presence or absence of RNase H. The combination of exonuclease deficient Klenow and Taq polymerase resulted in the unexpected discovery that this combination resulted in improved cDNA synthesis and hence aRNA production over other polymerases. Methods to test and optimize various polymerase activities and conditions, including the identification of activities and conditions which are not suitable for research or commercial applications, for use in the practice of the present invention are known in the art.—

Please substitute the paragraph on page 36, line 25, through page 37, line 12, with the following paragraph:

--In one general embodiment of the present invention, cDNA strands are synthesized from a collection of mRNAs using an oligonucleotide primer complex. If the target mRNA is the entire mRNA population, then the primer can be a polythymidylate region (e.g., about 5 to 25, preferably about 18-21 T residues), which will bind with the poly(A) tail present on the 3' terminus of each mRNA. Alternatively, if only a preselected mRNA is to be amplified, then the primer will be substantially complementary to a section of the chosen mRNA, typically at the 3' terminus. The promoter region is located upstream of the primer at its 5' terminus in an orientation permitting transcription with respect to the mRNA population utilized. When the second cDNA strand is synthesized, the promoter sequence will be in correct orientation in that strand to initiate RNA synthesis using that second cDNA strand as a template. Preferably, the promoter region is derived from a prokaryote, and more preferably from the group consisting of SP6, T3 and T7 phages (Chamberlin and Ryan, in *The Enzymes*, ed. P. Boyer (Academic Press, New York) pp. 87-108 (1982), which is incorporated herein by reference). A preferred promoter region is one that contains an arbitrary sequence (here for example, part of the M13 forward

priming site) 5' to the consensus T7 promoter sequence.” (5' AAA CGA CGG CCA GTG AAT  
TGT AAT ACG ACT CAC TAT AGG GAG A 3', SEQ ID NO:1).--